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July 02, 2010

Elizabeth Orlando
Keystone XL Project Manager
U.S. Department of State
OES/ENV Room 2657
Washington, DC 20520

Dear Ms. Orlando,

I am writing to convey my strong concerns about the draft environmental impact statement for the Keystone XL tar sands pipeline, released April 16, 2010. Under separate cover, I have written to express my concerns related to the State Department's broader determination of whether permitting this pipeline is in the national interest. This pipeline is a multi-billion dollar investment to expand our reliance on the dirtiest source of transportation fuel currently available. As a consequence it would have a critical impact on our nation's energy supplies and the environment. Yet the State Department has failed to analyze the most significant environmental impacts of this decision, as required by law.

The President has delegated the authority to permit transboundary pipeline projects to the State Department pursuant to Executive Orders 11423 and 13337, which require a finding that a project is in the national interest.[1] Prior to making the national interest determination, the National Environmental Policy Act requires the State Department to prepare, with notice and public comment, an environmental impact statement that assesses impacts on the environment that would result from a project, evaluates alternatives to the project that would avoid or minimize adverse environmental effects, and facilitates public, tribal and agency involvement in identifying significant environmental impacts.[2]

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[1] Exec. Order 11423, 33 Fed. Reg. 11741 (Aug. 16, 1968); Exec. Order 13337, 69 Fed. Reg. 25299 (Apr. 30, 2004).

[2] National Environmental Policy Act of 1969, Pub. L. No. 94-83; Department of State, *Keystone XL Oil Pipeline Project Draft EIS (DEIS)* (April 16, 2010), 1-1.

Keystone XL is a $7 billion pipeline that would transport up to 900,000 barrels/day (bpd) of tar sands bitumen almost 2,000 miles from Alberta to refineries in the Gulf Coast.[3] This pipeline would roughly double the quantity of tar sands fuel currently being imported, and in conjunction with two previously permitted tar sands pipelines that are not yet in full operation—Keystone and Alberta Clipper—would more than triple the quantity of tar sands fuel imported to the United States.[4] The cumulative effect of the three tar sands pipelines would be to increase tar sands imports to over 3 million barrels per day. U.S. refineries will invest billions of dollars more in refinery upgrades and expansions to process the bitumen transported by the pipeline.[5] From the Gulf Coast, the refined product could be marketed throughout the United States.

Producing fuel from tar sands causes significant environmental harm. Extracting tar sands bitumen and upgrading it to synthetic crude oil produces roughly three times greater greenhouse gas emissions than producing conventional oil on a per unit basis.[6] Tar sands development also has devastating effects on boreal forests and wetlands, wildlife habitat, migratory bird species, water quality, and air quality.[7] Yet the draft EIS for the Keystone XL decision fails to consider the primary environmental concern associated with the project. The

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[3] TransCanada Keystone Pipeline, L.P., *Application of TransCanada Keystone Pipeline, L.P. for a Presidential Permit Authorizing the Construction, Operation, and Maintenance of Pipeline Facilities for the Importation of Crude Oil to be Located at the United-States-Canada Border*, 7-9 (Sept. 19, 2008). "Bitumen" is the oil extracted from tar sands deposits, which is defined as "a naturally occurring viscous mixture, mainly of hydrocarbons heavier than pentane, that may contain sulphur compounds and that, in its natural occurring viscous state, is not recoverable at a commercial rate through a well." Energy Information Administration, online at: http://www.eia.doe.gov/glossary/glossary_b.htm.

[4] In 2009, the United States imported approximately 950,000 bpd of tar sands oil. CERA, *The Role of Canadian Oil Sands in US Oil Supply*, 9 (2010). Keystone will carry up to 590,000 bpd of bitumen, and Alberta Clipper will carry up to 800,000 bpd. Department of State, Keystone Pipeline Project (online at: http://www.keystonepipeline.state.gov/clientsite/keystone.nsf?Open); Enbridge, Alberta Clipper, online at: http://www.enbridge-expansion.com/expansion/main.aspx?id=1218.

[5] *E.g.*, the Motiva refinery, owned by Royal Dutch Shell and Saudi Aramco, is undertaking a $7 billion project to double capacity to 600,000 bpd and allow processing of heavier crudes. *In Texas, Oil Sands Firms Fight for Their Share*, The Globe and Mail (Nov. 6, 2009). The draft EIS cites multiple planned refinery expansions and upgrades in the Gulf Coast to increase bitumen and heavy oil refining capacity. Dept. of State, *DEIS* at 1-6.

[6] Woynillowicz et al., *Oil Sands Fever*, Pembina Institute, 22 (Nov. 2005).

[7] *Id.* at 36-52.

draft EIS contains no analysis of the potential greenhouse gas impacts of the pipeline due to increased development of the tar sands. Nor does it address any of the other significant environmental effects from tar sands development that occur in Canada, such as destruction of the boreal forest ecosystem, extensive water pollution, air pollution, habitat loss, and effects on species, including migratory birds.

The two methods of tar sands extraction are mining or in situ. In mining, the tar sands deposits are strip mined and transported to processing facilities that use hot water and separation techniques to extract the bitumen from the sand.[8] The mining, transport, and extraction processes all generate greenhouse gases, largely from burning natural gas and diesel fuel. Additional greenhouse gas emissions are produced from the loss of large areas of boreal forest and peatland, which sequester significant amounts of carbon, as well as through methane emissions from the vast tailings ponds that hold the waste water from the separation processes.[9] With in situ extraction, steam (usually generated by burning natural gas) is pumped underground to reduce the viscosity of the bitumen, allowing it to be pumped up.[10] Additional greenhouse gas emissions are produced in the process of upgrading bitumen to synthetic crude oil, which commonly involves coking and hydrotreating and uses natural gas for both heat and hydrogen production.[11] Mining has accounted for roughly 60% of the tar sands production to date.[12] In situ extraction is projected to increase to substantially higher levels in the future, as roughly 80% of the total deposits are only accessible through in situ extraction.[13]

Studies estimate that shifting to tar sands fuel increases lifecycle greenhouse gas emissions by up to 37% compared to the 2005 baseline fuel supply, depending in part on the extraction method used.[14] Based on a mid-range estimate, increasing the use of tar sands fuel to over 3 million barrels per day would increase lifecycle greenhouse gas emissions for

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[8] *Id.* at 11-12; Toman et al, *Unconventional Fossil-Based Fuels*, Rand, 18-19 (2008).

[9] *See* Yeh et al., *Land Use Greenhouse Gas Emissions for Conventional and Unconventional Oil Production*, Institute of Transportation Studies, U.C. Davis (Feb. 2009) (online at: steps.ucdavis.edu/People/slyeh/syeh-resources/uc-lcfs/Fossil fuel land use GHG Extended Abstract.pdf).

[10] Woynillowicz et al. at 11-12; Toman et al. at 19-20.

[11] *See* Toman et al. at 20-21.

[12] *Id.* at 18.

[13] *See id.* at 18.

[14] Mui et al., *GHG Emission Factors for High Carbon Intensity Crude Oils*, NRDC (June 2010) (surveying results from five studies compared to 2005 baseline).

transportation in the United States by an amount roughly equivalent to adding 18 million passenger vehicles to the roads.[15]

I am concerned that this project would undermine the Administration's energy policy for America. President Obama has announced a "broader strategy that will move us from an economy that runs on fossil fuels and foreign oil to one that relies more on homegrown fuels and clean energy," and he has stated that "for the sake of our planet and our energy independence, we need to begin the transition to cleaner fuels now."[16] Yet this project would drive massive new investments in infrastructure to supply energy that is dirtier than what we use now. The combined effect of the three tar sands pipelines would be to erase roughly two-thirds of the global warming pollution reductions that the Administration's historic motor vehicle standards would achieve in 2020.[17]

In its approval of the Alberta Clipper tar sands pipeline, the State Department dismissed concerns about increased greenhouse gas emissions from tar sands on the basis that they "are best addressed in the context of the overall set of domestic policies that Canada and the United States will take to address their respective greenhouse emissions."[18] In effect, the Department argued that emissions that occur in Canada are not our concern except in the context of international treaty negotiations to address the global problem of climate change.

This position ignores the realities of the situation. Rapidly growing tar sands development is making it increasingly difficult for Canada to address its greenhouse gas emissions either through domestic regulation or international commitments.

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[15] This estimate is based on the following calculation: 23g CO2e/MJ added lifecycle emissions from tar sands * 5506 MJ/bbl gasoline * 2,050,000 bbl/day * 365 days/yr * 1 metric ton/1,000,000g = 95 million metric tons CO2e/year. This is equivalent to roughly 18 million passenger vehicles or the electricity production for 12 million homes. *See* U.S. EPA, *Greenhouse Gas Equivalencies Calculator* (online at: www.epa.gov/rdee/energy-resources/calculator.html).

[16] President Obama, Remarks by The President on Energy Security at Andrews Air Force Base (March 31, 2010).

[17] *See* Environmental Protection Agency and Dept. of Transportation, *Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards; Final Rule*, Table III.F.1-1, (May 7 2010) (online at www.epa.gov/otaq/climate/regulations.htm).

[18] Dept. of State, *Record of Decision and National Interest Determination: Enbridge Energy, Limited Partnership – Alberta Clipper Pipeline Application for Presidential Permit*, 26 (Sept. 3, 2009)

Canada exports roughly one-third of its oil production and 99% of Canada's oil exports go to the United States.[19] Under business-as-usual, Canada projects that its greenhouse gas emissions will grow by 25% between 2005 and 2020 and emissions from tar sands production will be the single largest contributor to that emissions growth, accounting for about 44% of the increase.[20] Emissions from tar sands production are projected to almost triple over this period.[21]

Canada submitted an emissions target under the Copenhagen Accord of 17% below 2005 levels by 2020, consistent with the United States' target, but Canada has no regulatory mechanisms in place to achieve such a target.[22] By comparison, EPA projects that U.S. greenhouse gas emissions under business-as-usual will grow by only 3-4% by 2020.[23] Even the comparatively modest challenge faced by the United States in meeting its target has generated substantial concerns about costs.

In 2007 and 2008, the Canadian government proposed an emissions trading system to address greenhouse gases called "Turning the Corner."[24] While the proposal was due to come into effect in January 2010, implementing regulations have yet to be adopted and there appears to be no current intent to adopt such regulations.[25] Moreover, the proposed approach has been

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[19] Energy Information Agency, *Country Analysis Briefs; Canada; Oil* (online at: http://www.eia.doe.gov/cabs/canada/Oil.html). As discussed below, there are virtually no other export options for tar sands fuel available now.

[20] Government of Canada, *Turning the Corner; Detailed Emissions and Economic Modelling*, 41-42 (March 2008).

[21] *Id.*

[22] US Climate Action Network, *Who's on Board with the Copenhagen Accord* (online at: http://www.usclimatenetwork.org/policy/copenhagen-accord-commitments).

[23] Environmental Protection Agency, *EPA Supplemental Analysis of the American Clean Energy and Security Act of 2009* (Jan 2010) (online at www.epa.gov/climatechange/economics/economicanalyses.html).

[24] Environment Canada, *Turning the Corner: Regulatory Framework for Industrial Greenhouse Gas Emissions* (March 2008) (online at http://www.ec.gc.ca/doc/virage-corner/2008-03/541_eng.htm).

[25] The Government's website on the *Turning the Corner* plan states that final regulations are expected to be approved in fall 2009, and the regulations will come into force as planned on January 1, 2010. The website was last updated in August 2008. *See id.* A recent government summary of Canada's actions on climate change says only that "[t]he Government of Canada is working in collaboration with the provinces and territories towards the development of a cap and trade system that will ultimately be aligned with the emerging cap and trade program in

widely criticized for its reliance on intensity targets rather than hard emission limits, unlimited offsets, and firms' ability to make payments in lieu of reductions.[26] One academic study projects that even if the government's proposals were implemented, Canada's 2020 emissions would exceed the 2020 target by almost 200 million tonnes, achieving only about one-third of the needed reductions.[27]

Canada faces a serious challenge in addressing its greenhouse gas emissions, and tar sands are the single biggest part of the problem going forward. There is little basis for assuming that this problem will be effectively addressed while the United States supports increased production by further expanding market access for tar sands fuel. In fact, by approving this pipeline at this time, the State Department would be giving up leverage to encourage Canada to adopt policies to reduce greenhouse gas emissions and implement technologies to reduce emissions from tar sands production.

Yet the draft EIS does not address these concerns. In the document, the State Department asserts that when evaluating activities that occur within the United States, it is not required by law to consider any effect of such U.S. activities that occurs outside of the United States, termed "transboundary effects."[28] This position is contrary to longstanding NEPA guidance issued by the Council on Environmental Quality (CEQ), which is responsible for overseeing NEPA, as well as a recent district court decision.[29] CEQ's 1997 guidance on transboundary effects discusses NEPA's purpose, requirements and relevant case law, and concludes: "[i]n sum, based on legal and policy considerations, CEQ has determined that agencies must include analysis of reasonably foreseeable transboundary effects of proposed actions in their analysis of proposed actions in the United States."

In the EIS for the Alberta Clipper pipeline, the State Department similarly took the position that it was not legally required to consider transboundary effects. CEQ formally objected to the State Department's failure to consider such effects in a letter to Deputy

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the United States." Government of Canada, *Canada's Action on Climate Change* (online at: http://climatechange.gc.ca/default.asp?lang=En&n=D43918F1-1) (last modified Feb. 2, 2010).

[26] *See, e.g.*, Pembina Institute, *Backgrounder: The Government of Canada's Climate Policy* (Feb. 10, 2009).

[27] Mark Jaccard and Nic Rivers, *Estimating the Effect of the Canadian Government's 2006-2007 Greenhouse Gas Policies* (June 12, 2007).

[28] *See* Dept. of State, *DEIS* at 3.14-42.

[29] Council on Environmental Quality, *Council on Environmental Quality Guidance on NEPA Analyses for Transboundary Impacts* (July 1, 1997); *Government of the Province of Manitoba v. Salazar*, __ F.Supp.2d__, 2010 WL 744713 (D.D.C.) (Mar. 5, 2010).

Secretary Steinberg, which specifically cited the environmental impacts of tar sands production and the greenhouse gas emissions associated with production, transport and use of tar sands oil.[30] A federal court recently upheld CEQ's legal views, finding that "NEPA requires agencies to consider reasonably foreseeable transboundary effects resulting from a major federal action taken within the United States."[31] However, the Department disregarded CEQ's objection in Alberta Clipper proceeding without explanation and reasserted its position in the Keystone XL draft EIS.

The State Department's position is legally highly vulnerable and it does not make sense. NEPA is a procedural statute that imposes no substantive requirements. As the Supreme Court has stated, the "twin aims" of NEPA are to oblige agencies "to consider every significant aspect of the environmental impact of a proposed action," and to "ensure[] that the agency will inform the public that it has indeed considered environmental concerns in its decisionmaking process."[32] The whole purpose of NEPA is to ensure that federal agencies understand the potential environmental consequences of a proposed government action and consider alternatives that would avoid or minimize such consequences. That purpose cannot be fulfilled here absent a detailed analysis of the full global warming impacts of the Keystone XL project.

In addition, this failure cannot be corrected simply by adding information on the potential greenhouse gas emissions effects in the final EIS. That approach would effectively deny the opportunity for public comment on the analysis of the primary environmental concern associated with the project. The State Department should ask EPA, in consultation with the Department of Energy, to provide an estimate for lifecycle emissions for tar sands. The State Department should then issue a supplement to the draft EIS that would allow for public comment on the estimate and an associated analysis of the full transboundary environmental effects of the Keystone XL project. The discussion of global warming impacts in the supplemental draft EIS should also be informed by and consistent with final CEQ guidance on addressing climate change under NEPA.[33]

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[30] Letter from Nancy H. Sutley, Chair, CEQ to James B. Steinberg, Deputy Secretary of State, Dept. of State (July 14, 2009).

[31] *Government of the Province of Manitoba v. Salazar*, __ F.Supp.2d__, 2010 WL 744713 (D.D.C.) (Mar. 5, 2010).

[32] *Balt. Gas & Elec. Co. v. Natural Res. Def. Council, Inc.*, 462 U.S. 87, 97, 103 S.Ct. 2246 (1983) (quoting *Vt. Yankee Nuclear Power Corp. v. Natural Res. Def. Council, Inc.*, 435 U.S. 519, 553, 98 S.Ct. 1197 (1978)).

[33] CEQ has issued draft guidance for considering the effects of climate change under NEPA, but has not yet finalized that guidance. Nancy H. Sutley, Chair, CEQ, *Memorandum for*

The draft EIS also asserts that the Keystone XL project will not have any emissions effects associated with tar sands development because the tar sands will be developed (apparently to the same extent and within the same timeframe) with or without the pipeline.[34] The draft EIS states that if the pipeline is not available, the tar sands bitumen will likely be moved to market other ways, and if the U.S. market is not available, it will be sold to countries other than the United States, such as China. The draft states that the oil would be transported by a pipeline, which would have to be built, to a port on the Canadian coast and then moved by tanker.[35] The draft adds that if no Canadian port currently has sufficient capacity to handle the crude, a port would be expanded or built.[36] The draft EIS provides no analysis of the economic or legal viability of these scenarios and no support for its assertions.

In fact, there currently is no available means of transporting large additional quantities of tar sands crude to the Canadian coast. While the industry is interested in building a pipeline, it must cross lands held by First Nations peoples who have announced their opposition to the pipeline.[37] First Nations in British Columbia and a majority of the residents of British Columbia also strongly oppose opening the coast of British Columbia to oil tanker traffic.[38] Such opposition is likely to produce substantial delay, at a minimum, and may well block the pipeline altogether.

Heads of Federal Departments and Agencies; Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions (Feb. 18, 2010).

[34] *See* Dept. of State, *DEIS* at 3.14-41, 4-2 to 4-4.

[35] *Id.* at 4-4.

[36] *Id.*

[37] *See First Nations Say They Will Not Allow Pipelines and Oil Tankers Carrying Alberta's Tar Sands Oil in British Columbia*, CNW (March 23, 2010) (press release) ("Coastal First Nations from Vancouver Island to the BC/Alaska border are unanimous in their opposition and are joined by the vast majority of First Nations affected along the pipeline route from Kitimaat to Alberta.").

[38] Natural Resources Defense Council, *NRDC Backgrounder; Canadian Tar Sands and Potential for Asian Markets* (Nov. 2009) (citing a January 2009 poll finding that 3 out of 4 British Columbians support a ban on crude oil tanker traffic in inner British Columbia coastal waters). It appears unlikely that this opposition will diminish any time soon in the wake of the Gulf Coast spill. A Tanker Exclusion Zone, a voluntary tanker routing measure maintained by the Canadian Coast Guard and U.S. Coast Guard, has been in place for decades off the coast of British Columbia. *See* Canadian Coast Guard, *Tanker Exclusion Zone* (revised Jan. 5, 1998) (online at: http://www.ccg-gcc.gc.ca/e0003909).

Moreover, it is widely recognized that the pace and extent of tar sands development is affected by the price of oil and the costs of extracting, transporting, and upgrading tar sands bitumen. In the absence of the Keystone XL pipeline, there are no currently available alternatives for moving this large additional quantity of production to market, and at a minimum any such alternatives would be expected to have higher costs. The assumption in the draft EIS that tar sands production rates will be unaffected by the cost and availability of transport to market violates fundamental economic principles, and they are simply not credible.

There also is substantial evidence that the pipeline may produce excess capacity, at least for a period of time until production is increased to utilize the available transport. Several oil companies operating in the tar sands oppose the Keystone XL proposal on the grounds that it will result in pipeline overcapacity for tar sands exports, raising the costs for transport on existing pipelines (this is due to the structure of existing contracts, which guarantee pipeline operators certain rates of return independent of the quantities being transported).[39] It is critical that the State Department carefully and critically examine claims of need for this quantity of additional capacity at this time. The Department should consider, in particular, the effect of recent approvals of two pipelines that provide 1.4 million bpd of new capacity and are just starting operations.

The Department must also fundamentally reevaluate assumptions in the draft EIS about U.S. oil demand in light of recent policy changes and updated EIA forecasts. The draft EIS states, without support, that "U.S. demand for petroleum products has increased and is likely to continue increasing for the foreseeable future."[40] In fact, U.S. petroleum demand fell in 2008 and 2009, and EIA now projects that, absent further changes in fuel economy standards, demand is projected to grow by only 1.2% total over the next 25 years.[41] Assuming that further improvements in fuel economy standards are adopted, as President Obama recently announced, EIA projects that U.S. petroleum demand in 2035 will actually be 1.4% below 2008 levels.[42] While considerations related to changing sources of supply are valid, it is not

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[39] *See Enbridge warns of pipeline overcapacity*, Globe and Mail (Dec. 18, 2009); *Oil sands awash in excess pipeline capacity*, Globe and Mail (Apr. 23, 2010); *Pipeline fees revolt widens*, Globe and Mail (Apr. 27, 2010); National Energy Board, *Reasons for Decision In the Matter of TransCanada Keystone Pipeline GP Ltd.*, 27-28 (Mar. 2010).

[40] Dept. of State, *DEIS* at 4-2.

[41] Relative to 2008 levels. Energy Information Agency, *Annual Energy Outlook 2010* (May 11, 2010) (online at www.eia.doe.gov/oiaf/aeo/index.html)

[42] *See id.* and *President Obama Directs Administration to Create First-Ever National Efficiency and Emissions Standards for Medium- and Heavy-Duty Trucks* (May 21, 2010)

correct to assume that overall demand is increasing and that there is no alternative to this pipeline for meeting such demand. To the contrary, recent modeling by EPA shows that adoption of clean energy policies for the transportation sector could allow significant further reductions in future U.S. demand for oil in the range of 25-40 percent by 2030.[43] Yet the draft EIS provides no analysis of demand-side alternatives that could address our transportation needs and enhance our national security at a net savings to consumers.

In addition, in weighing needs for domestic U.S. consumption, the Department should analyze to what extent Gulf Coast refineries may export refined tar sands products to other countries.

I urge the Department to address these concerns by issuing a supplemental EIS that addresses all the significant environmental impacts of this project and viable alternatives, and by allowing an adequate time for public comment on the supplemental EIS. At a time when another federal agency is being publicly excoriated for shortchanging the NEPA process in a rush to permit oil wells, it would be unfortunate for the State Department not to consider fully the ramifications of this project on our country's energy and environmental future.

Thank you for your consideration of these comments.

Sincerely,

Henry A. Waxman
Chairman

(online at www.whitehouse.gov/the-press-office/president-obama-directs-administration-create-first-ever-national-efficiency-and-em)

[43] Environmental Protection Agency, *EPA Analysis of the Transportation Sector: Greenhouse Gas and Oil Reduction Scenarios* (Feb. 10,2010) (online at: http://www.epa.gov/oms/climate/GHGtransportation-analysis03-18-2010.pdf)